

Cony High School)	Departmental
Kennebec County)	Findings of Fact and Order
Augusta, Maine)	Air Emission License
A-829-71-B-M)	Amendment #1

After review of the air emissions license amendment application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

1. Cony High School, located in Augusta, Maine was issued Air Emission License A-829-71-A-N on July 24, 2002, permitting the operation of emission sources associated with their Augusta, Maine educational facility.
2. Cony High School has requested an amendment of their air emissions license to reflect the removal of a currently licensed boiler (designated Boiler #2) and the installation of two smaller boiler units (designated Boilers #3 and #4).
3. Cony High School has also requested the amendment reflect the conversion of Boiler #1 **from** firing #4 fuel oil with a sulfur content not to exceed 0.5% sulfur by weight **to** #2 fuel oil with a sulfur content not to exceed 0.35% sulfur by weight.

B. Emission Equipment

Cony High School is applying to include the operation of the following equipment to its air emissions license:

Fuel Burning Equipment

Equipment	Maximum Capacity (MMBtu/hr)	Maximum Firing Rate (gal/hr)	Fuel Type, % sulfur	Stack #
Boiler #1	8.4	60.0	#2 fuel oil, 0.35%	1
Boiler #3	2.4	17.4	#2 fuel oil, 0.35%	1
Boiler #4	2.4	17.4	#2 fuel oil, 0.35%	1

C. Application Classification

A modification at a facility with a licensed emissions increase of under (4) four TPY for any one regulated pollutant and under (8) eight TPY for total pollutants is determined to be a minor revision and not a major or minor modification. This amendment is determined to be a minor revision and has been processed as such.

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

In order to receive a license, the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in Chapter 100 of the Bureau of Air Quality regulations. BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in Chapter 100 of the Air Regulations. BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

B. Boilers #1 and #2

Cony High School is currently licensed to operate Boilers #1 and #2. Boilers #1 and #2 are each 8.4 MMBtu/hr boilers that fire #4 fuel oil with a sulfur content not to exceed 0.5% by weight. Boiler #1 has historically been the main boiler with Boiler #2 utilized as a back-up. Both units were manufactured in 1966.

The facility removed Boiler #2 and replaced it with two smaller units with heat input capacities of 2.4 MMBtu/hr each firing #2 fuel oil with a sulfur content not to exceed 0.35% sulfur by weight. The facility also converted Boiler #1 to fire #2 fuel oil with a sulfur content not to exceed 0.35% sulfur by weight. The conversion included the decommissioning of the #6 fuel oil delivery system and burner system for Boiler #1 and the installation of new #2 fuel oil burner system on Boiler #1. Cony High School plans to operate the two new units as the main boilers and utilize Boiler #1 as the back-up boiler.

BACT for the boiler units shall be a total annual facility fuel use limit of 75,000 gallons of #2 fuel oil at 0.35% sulfur by weight based on a 12 month rolling total. Compliance shall be based on fuel purchase records that shall include fuel receipts from the supplier showing the quantity of fuel delivered, the percent sulfur of the fuel and the date of fuel delivery. Fuel use records shall be maintained on a monthly basis, in addition to the 12-month rolling total.

A summary of the BACT emissions limits for Boilers #3 and #4 is as follows:

1. PM and PM₁₀ limits are derived from Chapter 103, however BACT is stricter. BACT shall be 0.08 lb/MMBtu for PM and PM₁₀.
2. BACT for sulfur content for #2 fuel oil fired in the boilers is 0.35% sulfur by weight.
3. NO_x emission limits are based on data from similar #4 fired boilers of this size and age.
4. SO₂ emission limit based on mass balance from sulfur content of the fuel.
5. CO and VOC emissions rates are based on AP-42 emission factors for boilers of less than 100 MMBtu/hr dated 9/98.
6. Visible emissions from each boiler stack shall not exceed 20% opacity on a six-minute block average except.

C. Annual Emission Restrictions

Cony High School will be assessed fees based on the following annual emissions, based on a 12 month rolling total:

- Total annual fuel use for all boilers based on a 12 month rolling total shall not exceed 75,000 gallons of #2 fuel oil at a sulfur content of 0.35% by weight.

Total Allowable Annual Emission for the Facility

<u>Pollutant</u>	<u>Tons/Year</u>
PM	0.4
PM ₁₀	0.4
SO ₂	2.0
NO _x	2.6
CO	0.2
VOC	0.01

III.AMBIENT AIR QUALITY ANALYSIS

According to the Maine Regulations Chapter 115, the level of air quality analyses required for a non major source shall be determined on a case-by case basis. Based on the information available in the file, and the similarity to existing sources, Maine Ambient Air Quality Standards (MAAQS) will not be violated by this source. An air quality analysis is not required for this amendment.

**Cony High School
Kennebec County
Augusta, Maine
A-829-71-B-M**

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**Departmental
Findings of Fact and Order
Air Emission License
Amendment #1**

ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License Amendment A-829-71-B-M subject to the conditions found in Air Emission License A-829-71-A-N and in the following conditions:

The following shall replace Condition (16) of Air Emission License A-829-71-A-N:

(16) Boiler #1, #3 and #4

A. Total facility fuel use shall be limited to 75,000 gallons per year of #2 fuel oil with a sulfur content no greater than 0.35% sulfur by weight based on a twelve month rolling total.

B. Compliance shall be based on fuel purchase records that shall include fuel receipts from the supplier showing the quantity of fuel delivered, the percent sulfur of the fuel and the date of fuel delivery. Fuel use records shall be maintained on a monthly basis, in addition to the 12-month rolling total.

C. Emissions shall not exceed the following:

Equipment		PM	PM₁₀	SO₂	NO_x	CO	VOC
	lb/MMBtu	0.08	-	-	-	-	-
Boiler #1	lb/hr	0.7	0.7	3.1	4.2	0.3	0.02
Boiler #3	lb/hr	0.2	0.2	0.9	1.2	0.1	0.01
Boiler #4	lb/hr	0.2	0.2	0.9	1.2	0.1	0.01

D. Visible emissions.

Visible emissions from the boiler stack shall not exceed 20% opacity on a six-minute block average.

**Cony High School
Kennebec County
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The following is a new condition:

(25) This amendment shall expire concurrently with Air Emission License A-829-71-A-N.

DONE AND DATED IN AUGUSTA, MAINE THIS DAY OF 2003.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
DAWN R. GALLAGHER, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: **December 18, 2002**

Date of application acceptance: **December 18, 2002**

Date filed with the Board of Environmental Protection: _____

This Order prepared by, Peter G. Carleton, Bureau of Air Quality